

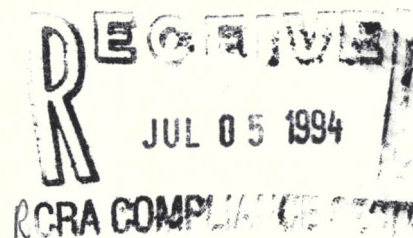
# Van Waters & Rogers Inc.

subsidiary of **Univar**

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CONIFER, CO 80433  
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FAX (303) 838-8059

June 30, 1994

Kevin Shanilec  
RCRA Compliance  
U.S. Environmental Protection Agency  
1200 Sixth Avenue  
Seattle, Washington 98101



FILE COPY

Dear Mr. Schanilec:

As you are aware, Van Waters and Rogers Inc. (VW&R) is attempting to obtain a discharge permit for treated ground water generated at the Portland, Oregon facility. An NPDES Permit application, formally submitted to the State of Oregon for approval, was rejected over concerns raised by the City of Portland regarding the potential to have elevated levels of ammonia and cyanide in the effluent of the treatment system. It is our belief that this potential can be significantly reduced by locating the extraction wells exclusively along the western fence line. This will require a modification to the ICM work plan since two of the three proposed extraction wells were to be located adjacent to the rail spur, in the vicinity of SMW-6 and SMW-7.

The phased approach for installation of the monitoring wells will remain as stated in the ICM work plan. The first extraction well (EXW-1) has been installed and is expected to commence operation within 45 days of approval of a discharge permit. This well will operate for approximately 90 days before the second phase is implemented. The two remaining ground water extraction wells will be installed in Phase II. It is anticipated that the second well will be operated for a period of 90 to 120 days before the third well is installed. These wells will be placed in areas of ground water contamination along the western fence line. Figure 1 (attached) shows the tentative locations for these wells, however the final locations will be based on the hydrologic parameters and operating performance of EXW-1 and upon the results of the most recent ground water analytical reports.

The ground water and effluent sampling routines as stated in the ICM work plan will be followed, however VW&R will add analyses for cyanide and ammonia to the analytical program for each waste stream.

This request to modify the ICM work Plan is based on the results of



five ground water treatment system efficiency tests which have been conducted to date. The first test (1-93) was run in December 1993 and four (Test 1-4) were conducted earlier this year. and the results were reported to the EPA in Progress Reports XXXIV and XXXVI. The tests were designed to approximate the treatment system influent at various stages of development.

#### Test 1-93

This test collected approximately 600 gallons of contaminated water equally from monitoring wells SMW-1,-4,-5,-6, and -7. The blower was operated at half speed (approximately 500 cfm) and the influent was pumped at a rate of 40 gpm. The removal efficiency for volatile organic compounds (VOCs) was 81.95%; 0% for ammonia; and cyanide was not detected.

#### Test 1

This test was designed to approximate the operational parameters which would be observed if the air stripper received ground water from only EXW-1 (located adjacent to the RCRA storage pad). Three hundred gallons of ground water were collected from EXW-1 using a submersible pump and were placed in a 350 gallon tote tank. The water was pumped into the tower at a rate of 20 gpm and the VOCs were stripped by a counter-current air flow of approximately 900 cfm. Table 1 summarizes the analytical data of the influent and effluent of the treatment system. It should be noted that for VOCs the removal efficiency was approximately 99.5% however for ammonia the removal efficiency was only 30.5%. Cyanide was not detected in either the influent or effluent samples.

#### Test 2

This test was designed to test the operational efficiency of the system if water was extracted from two wells (EXW-1 and a well located in the vicinity of SMW-4). Three hundred gallons of ground water (50%/50% mixture) were collected from EXW-1 and SMW-4 and were allowed to commingle in a 350 gallon tote tank. The water was processed through the stripping tower at a rate of 40 gpm with an air flow rate of approximately 950 cfm (100% blower capacity). The analytical results for this test are summarized in Table 1. The removal efficiency for VOCs in this test was greater than 99.9%. Ammonia however, was not stripped out of the ground water (removal efficiency of 0.0%). Again cyanide was not present in either the influent or effluent.

#### Test 3

This test approximated the influent which would be obtained from three ground water extraction wells located along the western boundary of the VW&R facility (EXW-1, vicinity of SMW-4, and vicinity of SMW-12). A 300 gallon mixture was obtained equally from EXW-1, SMW-4, and SMW-12. As with Test 2, the influent was processed at a rate of 40 gpm with an air flow rate of approximately 950 cfm. The VOC removal efficiency for this test was 98.3%; ammonia was 0.09%; and cyanide was not

detected.

#### Test 4

This test approximated the operational efficiency which may be expected if the influent was obtained from three perimeter extraction wells and one well located adjacent to the operational dock (similar distribution as that used in the initial efficiency test conducted in December 1993). An equally distributed sample (300 gallons) was obtained from EXW-1, SMW-4, SMW-12, and SMW-7. Again the system was run at an influent pumping rate of 40 gpm with an air flow rate of approximately 950 cfm. The VOC removal efficiency was 95.6%; ammonia 0.0%; and cyanide was not detected.

The presence of cyanide in ground water at the Portland facility has been a major concern for the City of Portland and is the primary reason for the rejection of the NPDES Permit application. The concentrations used in Section V (Effluent Characteristics) of the application were based on a ground water sample collected by Harding Lawson Associates (HLA) in November 1991. Since that time cyanide has only been detected once in one well ( SMW-7 in June 1993 at 0.014 ppm). Comprehensive employee interviews as well as a detailed records search did not offer any explanation as to the possible source of the cyanide contamination. Cyanide was only handled in prepackaged 55 gallon containers and in very limited quantities.

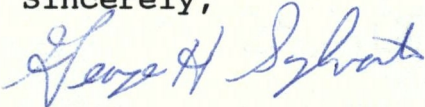
Based on the efficiency tests described above, the air stripper is an effective technique to remove VOCs from ground water generated along the west side of the Portland facility. The efficiency drops significantly when contaminated waters from SMW-6 and SMW-7 are introduced (Test 1-93 & Test 4). Similarly the ammonia concentrations in the effluent are also low until water from these wells are included. For these reasons, VW&R requests permission to modify the ICM Work Plan so as to allow the second and third well to be located along the western fence line rather than along the rail spur. Locating the wells at the perimeter of the facility offers several distinct advantages: The potential for future offsite migration of hazardous constituents would be reduced; contamination that has already migrated off-site may be drawn back; and the water quality of the effluent from wells in this area may meet the discharge standards imposed by the City of Portland, thereby allowing VW&R to proceed with ground water remediation at the facility.

Finally, upon your approval to modify the ICM work plan, I would like to approach the ODEQ and City of Portland with a proposal to reopen the NPDES negotiations or to allow for discharge of the treated ground water via the sanitary sewer system. The proposal would reflect the new effluent characteristics based on the results of the 1994 Efficiency Tests described above. In order to accomplish this task I may need your participation in a meeting with representatives of the ODEQ and the City of Portland.

I believe the proposed modification to the ICM Work Plan will not in any way detract from the long term project goals and may in fact lead to a greater level of protection for the environment. In addition this modification may help settle the matter of a discharge permit.

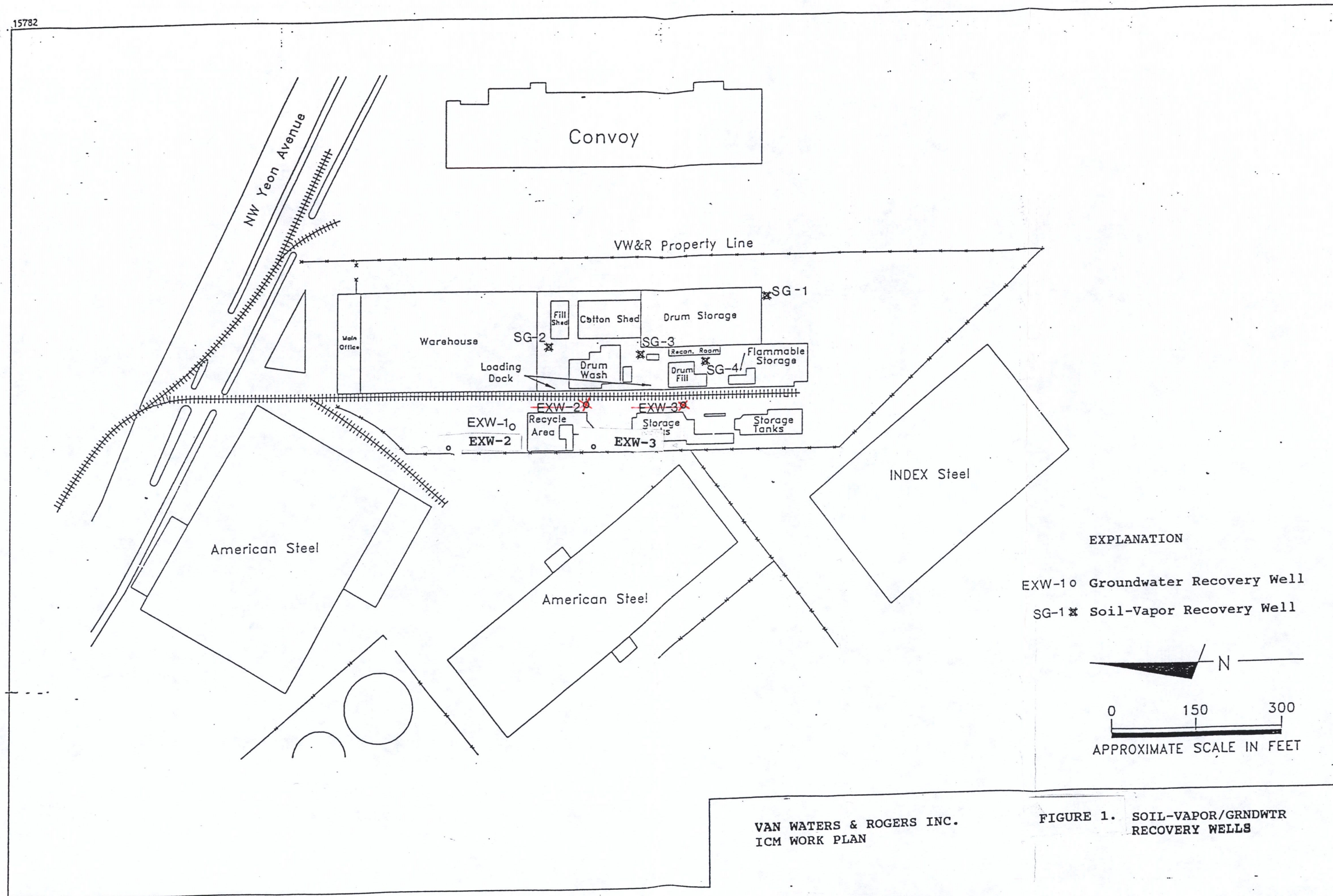
Please contact me with our comments at the above address or via our corporate PhoneMail System (800-284-6264 Ext. 3928) at your earliest convenience.

Sincerely,

A handwritten signature in blue ink, appearing to read "George H. Sylvester".

George H. Sylvester  
Senior Project Manager  
Environmental Affairs

cc: D. St.Louis - ODEQ  
P. Fink - ODEQ  
J. Huntington - City of Portland  
B. Long - EPA/OOO  
W. Grotheer - Univar  
K. Weems - VW&R



VAN WATERS & ROGERS INC.  
ICM WORK PLAN

FIGURE 1. SOIL-VAPOR/GRNDWTR  
RECOVERY WELLS